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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/774,492      | 01/31/2001  | Daniel J. Graney     | P/12-839            | 3104             |

7590 10/28/2002

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EXAMINER

NGUYEN, KIMBERLY T

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1774

DATE MAILED: 10/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/774,492

Applicant(s)

GRANEY, DANIEL J.

Examiner

Kimberly T. Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 August 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.                      6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

This action is in response to the amendment submitted on August 15, 2002. The previous rejections of **claims 1-9** under 35 USC 103(a) are withdrawn; however, a new rejection is as follows.

***Claim Rejections - 35 USC § 112***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Due to Applicants' remarks, the previous rejection based upon 35 USC 112, 2<sup>nd</sup> paragraph of claims 1-9 is withdrawn.

***Claim Rejections - 35 USC § 103***

**Claims 1-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shetty et al., U.S. Pat. No. 5,451,449 in view of Akamatsu et al., U.S. Pat. No. 6,340,525 B1 in further view of Ouderkirk et al., U.S. Pat. No. 5,783,120.

Shetty shows an iridescent co-extruded multilayered structure comprising at least 10 very thin layers of substantially uniform thickness usually in the range of about 30 to 500 nm (column 1, lines 23-31) and are generally parallel wherein the adjacent layers are of different thermoplastic resinous materials whose refractive index differs by at least about 0.03 or by 0.06 (claims 1, 4, 6). Shetty shows that one of the thermoplastic resinous materials is polyethylene terephthalate (claim 7) or polymethyl methacrylate (claim 8).

Shetty does not show that the multilayered structure has the thicknesses or width as in instant claims 1-2 and 9. However, such ranges are properties which can be easily determined by

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one of ordinary skill in the art. With regard to the limitation of the ranges of thicknesses and width, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. thicknesses and width) fails to render claims patentable in the absence of unexpected results.

Shetty does not show the ultimate tensile at break as in instant claims 1-2. Akamatsu shows a multilayered filament (microfilament thread form) comprising a terephthalate or naphthalate (claims 1 and 5). Shetty shows that the tensile strength (stress at break) is about 6.7 to 7.2 kgf (column 13, lines 42-50 and Table 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a terephthalate and/or naphthalate multilaminate structure or filament structure with a tensile strength of 6.7 to 7.2 kgf because it is known that such a structure has excellent mechanical properties such as resistance to fatigue, dyeability, wear resistance, and dimensional strength.

Shetty does not specifically show that the multilayered structure is uniaxial as in instant claims 1-9. Ouderkirk shows an iridescent co-extruded optical film wherein the resins in the film can be uniaxially oriented (claim 14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make a uniaxial oriented iridescent film since it is known, as shown by Ouderkirk, that such films can be effectively oriented in the uniaxial direction.

### ***Response to Arguments***

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Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection. Shetty and Akamatsu are still used in the rejection of claims 1-9 to show that the iridescent film.

On page 5, Applicants argue that Akamatsu shows a monolayered structure with the same tensile strength as in the instant invention and that it is not the same as the instant invention since Akamatsu does not show a multilayered structure. Examiner is not persuaded because such a tensile strength is optimizable. Such a tensile strength is a property which can be easily determined by one of ordinary skill in the art. With regard to the limitation of the tensile strength, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. tensile strength) fails to render claims patentable in the absence of unexpected results. All of the aforementioned limitations are optimizable as they control the resistance to fatigue, dyeability, wear resistance, and dimensional strength of the film. As such, they are optimizable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the film with the limitations of the tensile strength since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Further, though Shetty does not specifically show the tensile strength of the layers as in instant claim 1, Shetty shows the same or similar layers as in the instant invention and it would be expected, absent any evidence to the contrary, that the multilayered structure of Shetty can also have the same tensile strength.

On pages 5-6, Applicants argue that the thicknesses of the layers are not optimizable. This argument is moot since it is shown that Shetty shows an iridescent co-extruded multilayered structure comprising at least 10 very thin layers of substantially uniform thickness usually in the range of about 30 to 500 nm (column 1, lines 23-31).

***Conclusion***

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly T. Nguyen whose telephone number is (703) 308-8176. The examiner can normally be reached on Monday to Friday, except on every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

